California Regional Water Quality Control Board
Santa Ana Region

Linda S. Adams
Secretary for
Environmental Protection

3737 Main Street, Suite 500, Riverside, California 92501-3348
Phone (951) 782-4130 • FAX (951) 781-6288 • TDD (951) 782-3221
www.waterboards.ca.gov/santaana

Arnold Schwarzenegger
Governor

M60050_004335
MCAS EL TORO
SSIC NO. 5090.3.B

June 5, 2008

Base Realignment and Closure
Attn: Ms. Debra Theroux
Deputy Base Closure Manager
7040 Trabuco Road
Irvine, California 92618

DETERMINATION OF NO FURTHER ACTION, FORMER UNDERGROUND STORAGE TANK RELEASE SITE 529
FORMER MARINE CORPS AIR STATION, EL TORO
Geotracker No. T0605901125

Dear Ms. Theroux:

This letter confirms the completion of the site investigation, remedial action and groundwater monitoring which were required to mitigate the release of gasoline fuel from the underground storage tanks formerly located at the above described site. Enclosed is the Case Closure Summary for the referenced site for your records.

Based on the available information, including the current land use, and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground storage tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, California Code of Regulations, Division 3, Chapter 16, Section 2721 (e). (If a change in land use is proposed, the owner must promptly notify this agency.)

Please telephone John Broderick of my staff at (951) 782-4494 if you have any questions regarding this matter.

Sincerely,

Gerard J. Thibeault
Executive Officer

Attachment: Case Closure Summary

cc via email: Ms. Lynn Hornecker, BRAC PMO West (w/ attachment)
Ms. Lilly Lee, SWRCB, Cleanup Fund (w/ attachment)

CASE CLOSURE SUMMARY
Leaking Underground Fuel Tank Program

I. Agency Information DATE: June 2, 2008

AGENCY NAME	California Regional Water Quality Control Board - Santa Ana Region	STAFF	John Broderick
ADDRESS	3737 Main St. Suite 500	TITLE	Engineering Geologist
CITY/STATE/ ZIP	Riverside CA 92501-3348	PHONE	(951) 782-4494, main # 782-4130

II. Case Information

SITE NAME	former Underground Storage Tank 529 Site		
LOCATION	Former Marine Corps Air Station, El Toro, Irvine		
REGIONAL BOARD CASE #	T0605924744	LOCAL AGENCY CASE #	
RESPONSIBLE PARTIES	ADDRESS	PHONE NUMBER	
Attn: Ms. Debra Theroux Deputy Base Closure Manager	BRAC PMO West 1455 Frazee Road, Suite 900	(619) 532-0919	
	San Diego, CA 92108		

TANK NO.	SIZE IN GALLONS	CONTENTS	CLOSED IN PLACE/ REMOVED	DATE
529	25,000	Fuel/heating oil	Removed	6/19/1997

III. Release and Site Characterization Information

CAUSE AND TYPE OF RELEASE:	Fuel oil or heating oil fuel release to soil and groundwater				
MONITORING WELLS INSTALLED?	No	NUMBER		PROPER SCREEN INTERVAL?	
DEEPEST GW DEPTH		SHALLOWEST GW DEPTH	100 feet		
GROUNDWATER, MOST SENSITIVE CURRENT USE:	Municipal	GW FLOW DIRECTION	west		
DRINKING WATER WELL(S) AFFECTED?	No	AQUIFER NAME	Irvine Groundwater Management Zone		
IS SURFACE WATER AFFECTED?	No	NEAREST/AFFECTED SW NAME			
OFF-SITE BENEFICIAL USE IMPACTS (ADDRESSES/LOCATIONS):	None				
REPORT(S) ON FILE?	Yes	WHERE IS/ARE REPORT(S) FILED?	RWQCB – Santa Ana Region		

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

MATERIAL	AMOUNT	ACTION (TREATMENT, DISPOSAL)/ DESTINATION	DATE
TANK/PIPING	1/40 feet	Transported for destruction/recycling	6/1997
FREE PRODUCT			
SOIL	Unknown, 161 tons, & 261 tons	Sent to soil recycling facility	6/1997, 6/2006, & 1/2008
GROUNDWATER			

III. Release and Site Characterization Information (Continued)

Maximum Document Contaminant Concentration – Before and After Cleanup				
CONTAMINANT	SOIL (mg/kg)		WATER (µg/l)	
	INITIAL	CURRENT	INITIAL	CURRENT
BENZENE	0.16	0.32	0.53	
TOLUENE	2.2	3.6		
ETHYLBENZENE	3.5	3		
XYLENE	20	14.2		
MTBE	ND	ND		
TPRH	27,526			
TPH – G	2,200			
TPH – D	52,800	22,000	10,500	
NAPHTHALENE	46	69		
MOTOR OIL	3,200	16,000		
1,2,4 TMB	30	24		
1,3,5 TMB	5.8	4.5		

COMMENTS REGARDING INVESTIGATION AND REMEDIATION

Former UST 529 was located northeast of Building 529 (also known as Building 307A) in the southwestern quadrant of the former Marine Corps Air Station, El Toro, in the City of Irvine. The tanks were used for storage of fuel oil or heating oil. The tank was a 25,000-gallon concrete tank that was installed in 1944. The tank supplied fuel to Building 529. This building was the boiler house for the laundry facility at nearby Building 307. The boilers were converted to natural gas during the 1970's.

In 1992, during the RCRA Facility Assessment, soil samples were collected from two angle borings adjacent to UST 629. Benzene was not detected above the reporting limits in the soil samples. Petroleum as TRPH was detected at a maximum concentration of 27,526 mg/kg.

In 1994, soil gas samples were collected near UST 529 during the investigation of IRP Site 24. Benzene was not detected at or above reporting limits in the soil gas samples. Total petroleum hydrocarbons were detected at a maximum concentration of 725 µg/l.

In June 1997, the tank and 40 feet of associated piping were removed under oversight of the Orange County Health Care Agency. The excavation was approximately 60 feet long by 40 feet wide and 20 feet deep. Seven confirmation soil samples were collected, and the maximum diesel concentration was 52,800 mg/kg at a depth of 15 feet at the northeastern end of the tank excavation.

During 1997 and 1998, verification soil samples were collected from thirteen borings. Diesel or TPH-extractable was detected in soil samples extending to a depth of 100 feet (near groundwater) in three borings in the tank excavation area. Petroleum hydrocarbons were not detected in the samples collected near the 100-foot depth in eight of the borings. Benzene was detected in five of the samples, and the maximum benzene concentration was 420 µg/kg. MTBE was not detected at or above reporting limits. Diesel leachate concentrations were measured in several soil samples using SPLP Method 1312. A diesel concentration of 24,000 mg/kg corresponded to a diesel leachate concentration of 4 mg/l.

During 1998, groundwater samples were collected from three of the verification borings. Diesel was detected at a maximum concentration of 10.5 mg/l. Benzene was detected at 0.53 µg/l in one sample, and benzene was not detected in the other samples.

During June 2006, approximately 191 tons of petroleum-impacted soils were excavated from the southwestern end of the former tank area. The excavation was approximately 40 feet long by 20 feet wide and 20 feet deep. Diesel was detected at 18,000 mg/kg, benzene was detected at an estimated value of 160 µg/kg, and naphthalene was detected at 39,000 µg/kg in the excavation sample. MTBE, DIPE, ETBE, TAME, TBA, and T-amy alcohol were not detected at or above reporting limits. The estimated mass of petroleum hydrocarbons removed in petroleum-impacted soils was 10,410 pounds.

During December 2007, approximately 261 tons of petroleum-impacted soils were excavated from the northeastern end of the former tank area. The excavation was approximately 27 feet long by 22 feet wide and 25 feet deep. Diesel was detected at 22,000 mg/kg, benzene was detected at 320 µg/kg, and naphthalene was detected at 69,000 µg/kg in the excavation sample. MTBE, DIPE, ETBE, TAME, and TBA were not detected at or above reporting limits. The estimated mass of petroleum hydrocarbons removed in petroleum-impacted soils was 31,321 pounds.

The former UST 529 Site overlies the IRP Site 24 volatile organic compound (VOC) plume. It is located downgradient of the plume source areas and west and southwest of the axis of the line of groundwater extraction wells located to maximize interception of the highest plume VOC concentrations. This site is located within the capture area of the IRP Site 24 groundwater remedy, a groundwater pump and treatment system. The remedy became operational in October 2006 and is planned for long-term operation and groundwater treatment. Any impacts to groundwater from the site and potential impacts will be intercepted by the Site 24 groundwater remedy during its long-term operation.

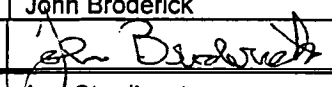
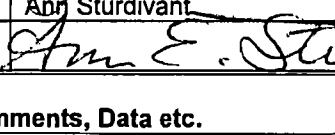
The proposed future reuse for the former UST 529 Site is as a parking area for a proposed lake at the Great Oak Park.

Closure is recommended, based on the removal of the significant mass of petroleum impacted soils to a depth of 20 feet below ground surface and the in place long-term remedy of impacts to underlying groundwater.

IV. Closure

DOES COMPLETED CORRECTIVE ACTION PROTECT *EXISTING* BENEFICIAL USES PER REGIONAL BOARD BASIN PLAN?				Yes	
DOES COMPLETED CORRECTIVE ACTION PROTECT *POTENTIAL* BENEFICIAL USES PER THE REGIONAL BOARD BASIN PLAN?				Yes	
MONITORING WELLS	n/a	NUMBER DECOMMISSIONED		NUMBER RETAINED	
LIST ENFORCEMENT ACTIONS TAKEN		None			
LIST ENFORCEMENT ACTIONS RESCINDED		n/a			

V. Regional Board Representative Data

STAFF	John Broderick	TITLE	Engineering Geologist
SIGNATURE		DATE	6/2/2008
SUPERVISOR	Ann Sturdivant	TITLE	Senior Engineering Geologist
SIGNATURE		DATE	6/2/2008

VI. Additional Comments, Data etc.

None.